and the modern agricultural know-how to farmers of backward areas and adivasis;

(b) whether thtre S_s any such scheme to train Adivasis of Orissa about modern agricultural know-how; and

(c) if so, the detellls thereof?

THE MINISTEF OF STATE IN THE DEPARTMENT OF AGRICULTURE AND COOPERATION IN THE MINISTRY Ol AGRICULTURE (SHRI YOGENDtA MAKWANA): fa) The benefits of irrigation and modern ngricultu al know-how are provided to farmers of backward areas and adivasis: through a number of development s'hemes. The integrated water resources development scheme, including schemes in tribal and backward areas are planned and implemented by the State Governments. The tribal sub-plan approach, which aims at an ftrea development of scheduled tribe concentrated areas is meant to specifically benefit the tribal farmers. In addlition, the Central Ground Wate • Board is giving special attention or studying the possibilities of water resources development in tribal and backward areas.

For the transfer ot modern agricultural know-how *0* th_{e} farmers, a programme of agi'cultural extension known as the Tra ning and Visit system is being imple mented in 17 states, including tribal ad backward areas in these States. This scheme being implemented bv the concerned state government provides for a large number of field extern ion staff who regularly visit the famers and train them in modern agricultural technology. The transfer .of agricultural technology is also achien ?d through the programmes run by the Indian Council of Agricultural Research, namely, National demonstrations, operational research projects, Krishi Vigyan Ken-dras, and lab. to lend programme.

Cb) and (c> Tn order to train the farmers of Orissa about the modern agricultural knov -how, the training and visit system uf extension was introduced in the f^{L} tate of Orissa since June, 1977. This project is i_{n} .operation in all the 30 districts of the State including the backward areas and predominently adivasi districts. The modern agricultural technologies developed by the Orissa University of Agriculture and Technology are tested in 13 adaptive research centres, of which 9 are in the tribal areas, and are transferred to the farmers through the systematic draining of the field extension workers in these technologies and the regular visit of the extension workers to the farmers' fields. These efforts are supplemented by exhibition, demonstrations, farm fairs, and farm related programmes through mas_{s} media.

There are also 5 Krishi Vigyan Kendras operating j_{n} Orissa out *ot* which 3 aro^ocated in the adivasi districts of Keonjhar, Koraput and Gan-jam. They train farmers, farm women and farm youth in agriculture and allied areas. There are also 3 scheduled tribe projects run by the Indian Coundl of Agricultural Research in the tribal districts of Koraput, Phulbani and Keonjhar.

The Integrated Rural Development Programme is being implemented in all the blocks of Orissa including tribal areas. Under this, the farmers are assisted in taking up modern agriculture through financial subsidies for investing fin minor irrigation, land development and other agricultural activities. The pattern of subsidy is generally 25 per cent for small farmers, 33.3 per cent for marginal farmers, agricultural labourers and rural artisans and $^{50}P^{er\ cent}$ $*^{\circ}r^{tribal}$ beneficiaries.

Research and development on agriculture with low water requirement

2402. SHRI CHIMANBHAI MEHTA: Will the Minister of AGRICULTURB be pleased to state;

(a)whether Government ar_{e} awar* of the latest research done in Israel and other countries in the fields oi hydrotmonics and other methods «*" agriculture where in minimum water

is needed and if so, what are the details thereof;

(b) whether Government propose to undertake research in thlis field and if so, the details thereof;

(c) whether Government also pro pose to adopt these methods or have already adopted and if so, what are the details thereof including the "area covered by these innovative methods during the last three years; and

(d) what are the future program mes with regard to the research and development of agriculture wlith low water requirements, its budgetary allocations and other details?

THE MINISTER OF STATE IN THE DEPARTMENT OF AGRICULTURE AND COOPERATION IN THE MINISTRY OF AGRICULTURE (SHRI YOGENDRA MAKWANA): (a) Yes, Sir. Hydrophonics is a method of growing plants without soil in a nutrient solution, generally practised in some specific situations. We are aware of the research being done on this aspect in. Israel and in some other countries for the cultivation of vegetables and ornamental plants. This system is in practice on a commercial scale where water is limiting. This technology Ss high input and high cost oriented besides being sophisticated.

(b) No, Sir. Not in the near future.

(c) It is not proposed to adopt these methods on any extensive scale.

(d) The Indlian Council of Agricul tural Research has launched several research programmes to develop tech nologies for crop production with limited water use. The research pro gramme include (i) the establish ment of a Central Research 'nstitute for Dryland Agriculture at Hyderabad with the 7th Plan outlay of Rs. 138.60 lakhs; (ili) an All-India Coordinated Research Project on Dryland agricul ture with an outlay of Rs. 458.81 lakhs for rainfed areas; (hi) an All-India Coordinated Research Project On Water Management with 26 centres for irrigated areas at an outlay of Rs. 430 lakhs. It ds proposed to set up the Project Directorate for Water Managament research during the 7th plan. Through these research programmes, efforts a're being made to increase water use efficiency and reduce water requirements through such methods as drip and sprinkler irrigation systems. In addition to these, the Water Technology centres at IARI and Coimbatore and the proposed one in the Eastern Region will also undertake similar programmes on efficttent water use. In addition, the Department of Agriculture, Government of India has launched a centrally sponsored scheme ot 'National Watershed Development Programme' for Rainfed Agriculture from July, 1986 till the end of 7th Five Year Plan at an outlay of Rs. 239 crores for the unirrigated arable lands.

***Q' Mark Pumpsets**

2403. SHRI CHIMANBHAI MEHTA: Will the Minister of WATER. RESOURCES be pleased to refer to answer to Unstayed Question No. 770 given in the Rajya Sabha on 31st July, 1987 and state:

(a) the details of appropriate mech-anism for, prevention and substandard production at each stage in case of ISI pumpsets;

(b) the detailed comparison between the quality control mechanism of ISI and 'Q' mark pumpsets;

(c) the names of the members of the wolrking Group of National Level Standing Committee for improving the operational efficiency;

(d) the major details of the report of the working group; and

(e) whether the said working Group was asked to give their comments on the quality of 'Q' mark pumpsets manufactured hy small scale industries of Gujarat; if so, what are the comments of the Group?